

LaCie d2 drives



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Federal Communications Commission Radio Frequency Interference Statement (FCC)

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one of the following measures:

- Reorient or relocate the receiving antennas.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the reseller or an experienced radio/TV technician for help.

Shielded cables and I/O cards must be used for this equipment to comply with the relevant FCC regulations.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada Compliance Statement

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Manufacturer's Declaration for CE Certification

We, the LaCie Group SA, solemnly declare that this product conforms to the following European standards:

Class B EN60950, EN55022, EN50082-1, EN60555-2

With reference to the following conditions:

73/23/EEC	Low Voltage directive
89/336/EEC	EMC Directive

Laser Products

This equipment is certified to comply with DHHS Rule 21 CFR Chapter I, subchapter J in effect as of date of manufacture. This equipment is classified as a Class I Laser product and no hazardous laser radiation is emitted outside the drive.

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1. Introduction

Congratulations on the purchase of your new LaCie DVD Multi Drive. Thanks to its support of CD-ROM, CD-R, CD-RW, DVD-RAM, DVD-ROM, DVD-R, and DVD-RW media, this stylish, high-performance external U&I drive (one USB 2.0 port and two FireWire/IEEE 1394 ports) will allow you to quickly and easily record audio, video and data on either DVD-RAM discs, DVD-R/RW general use discs or CD-R/RW media. For even greater flexibility, your LaCie external drive is also cross-platform, which enables you to use it on both Macs and PCs.

The LaCie DVD Multi Drive was designed to allow you to use your desk-space efficiently. Engineered to be rack mountable, you can quickly and easily integrate the LaCie drive into your standard 19-inch computer equipment racks, using the LaCie rackmount kit (sold separately).

With all it can do for you, we're confident that your LaCie DVD Multi Drive will quickly become an important tool in your day-to-day business and personal computing.

This manual will help you to:

- Install your new device properly
- Get your drive up and running
- Quickly learn how to operate it

1.1 Icons Used in This Manual

Italicized paragraphs feature an icon describing the type of information being given.



Important Note



Technical Information or News



Warning! (This icon indicates potential hazard).

Precautions

Always follow the basic precautions to use your LaCie DVD Multi Drive safely and correctly. Respecting these guidelines will help to avoid the possibility of personal injury to yourself or others, as well as to prevent damage to your device and other computer equipment. For a complete list of precautions, please see chapter [11. Health, Safety and General Use Precautions](#) of this manual.

A few words about copyright laws...

Your new LaCie drive opens up a whole world of possibilities for copying data and audio onto disc. Please be responsible in your use of this technology. Before copying anything onto DVD or CD media, make sure you are not violating any copyright laws. Most software companies allow licensed owners to make one (1) backup or archive copy of their software. Check your software's license agreement for specific details.

Warranty

LaCie and its suppliers accept no liability for any loss of data during the use of this device, or for any of the problems caused as a result. As a precaution, it is recommended that the CD-R, CD-RW, DVD-RAM, DVD-R and DVD-RW media be tested after they have been written to. Under no circumstances do LaCie or its suppliers guarantee the reliability of the DVD or CD media used in this drive.

Manual Updates

LaCie is constantly striving to give you the most up-to-date, comprehensive User's Manuals available on the market. It is our goal to provide you with a friendly, easy-to-use format that will help you quickly install and utilize the many functions of your new device.

If your manual does not reflect the configurations of the product that you purchased, please check our Web site for the most current version available. You can access our manuals at: www.lacie.com/support/manuals

1.2 What is U&I?

U&I incorporates two of the most common and fastest interfaces on the market today, meeting the demands for speed, flexibility and ease of use in a wide variety of applications. In "U&I," the "U" stands for USB and the "I" stands for "IEEE 1394."

USB 2.0

The new USB 2.0 standard provides higher bandwidth for high-speed peripherals such as external hard drives, high-speed scanners and CD-RW drives. USB 2.0 delivers transfer rates up to 480Mb/s, while conveniently maintaining backward compatibility with USB 1.1 devices.

USB 2.0 can still be used to connect lower-speed USB 1.1 ports and devices like digital cameras, scanners, modems, keyboards, mice, joysticks and printers. In the USB 2.0 system, existing USB peripherals do not have to be upgraded, and lower-speed devices will not require additional performance, instead operating as USB 1.1 devices.

USB Icons

These icons will help you easily identify the USB interfaces. They appear on USB cables and next to the USB port connectors on certain computers.



USB 1.1 icon



USB 2.0 icon

FireWire / IEEE 1394

FireWire is Apple's implementation of IEEE 1394, and is capable of transferring large amounts of data between computers and peripherals at a high rate of speed. The FireWire standard defines 100, 200 and 400Mb/s devices and can support multiple speeds on a single bus.

With FireWire, there is no need for terminators, device IDs, screws, or complex setup, and the standard supports free-form daisy chaining for peer-to-peer implementations. A fast, cross-platform serial bus, FireWire is ideal for use with multimedia peripherals and high-speed devices such as digital video cameras and hard drives.

FireWire Icons

These icons will help you easily identify the FireWire interface. They appear on FireWire cables and next to the FireWire port connectors on certain computers.



FireWire (Apple IEEE 1394) icon



iLink (Sony IEEE 1394) icon



DV icon (IEEE 1394 logo
mainly used on digital cameras)

1.3 LaCie DVD Utilities

The LaCie DVD Utilities software enables Windows and Mac users to write to CD and DVD media for backup, storage or audio and video applications. Users need to install this software on their computer before using their LaCie drive to record to DVD-RAM, DVD-R/RW and CD-R/RW media. Please refer to the LaCie DVD Multi Drive Software Guide on the LaCie DVD Utilities CD-ROM for further explanations of the software capabilities and installation steps.

2. Getting to Know Your LaCie DVD Multi Drive

What can your LaCie DVD Multi Drive do?

- Create professional quality DVDs.
- Master your own audio, video or data CD-R/RWs and DVD-R/RWs.
- Backup important home and business data.

2.1 Minimum System Requirements

Hardware requirements:	· Mac or PC with USB 2.0 or 1.1 interface Or: · Mac or PC equipped with FireWire/IEEE 1394/iLink interface card* (SBP-2 compatible).
System requirements:	Minimum: · Mac OS 9.1(Apple FireWire support 2.2 and greater) and 10.1.2 or later · Windows 98 SE (Second Edition), Windows Me (Millennium Edition), Windows 2000, or Windows XP · Intel Pentium II/350MHz compatible processor or greater, 64MB RAM minimum Recommended: · Mac OS 9.1(Apple FireWire support 2.2 and greater) and 10.1.2 or later · Windows 98 SE (Second Edition), Windows Me (Millennium Edition), Windows 2000, or Windows XP · 1.2GHz processor or greater; 256MB RAM
Additional Requirements for DVD Playback and Pre-mastering:	· Video Card supporting DirectDraw Standard · Audio Card supporting 44.1KHz or 48KHz sampling rate · Monitor Resolution of 1024 x 768, 24-bit color · Microsoft DirectShow 6.4 or greater
Additional Requirements for DV Capturing and DVD Authoring:	· Intel Pentium II/600Mhz processor or greater for video capture · Intel Pentium II/400Mhz processor or greater for video authoring · 128MB RAM minimum (256MB is recommended) · Monitor Resolution of 1024 x 768, 16-bit color · 5GB of free space for temporary caching of 4.7GB of DVD-Video · 10GB or greater (20GB is suggested) Hard Drive for storing video and audio files

*Note: If you have a 4-pin connector on your FireWire interface card, you will need to purchase a 4-to-6 pin FireWire cable.

Supported DVD / CD Formats

Your LaCie drive is compatible with most popular DVD and CD formats:

Format	Type of Disc	Record	Read
DVD	DVD-RAM 2.6GB, 5.2GB w/cartridge	X	X
	DVD-RAM 4.7GB, 9.4GB w/cartridge (type 1, type 2, type 4 cartridge)	X	X
	DVD-RAM 4.7GB, 9.4GB w/o cartridge	X	X
	DVD-RAM 2.6GB, 5.2GB w/o cartridge	X	X
	DVD-R 4.7GB for General use (Ver. 2.0)	X	X
	DVD-ROM	--	X
	DVD-R 3.95GB, 4.7GB for Authoring	--	X
	DVD-R (General use only for write)	X	X
	DVD-RW (General use only for write)	X	X
	DVD-ROM (single and dual layer)	--	X
	DVD (single and dual layer) 80 mm disc	--	X
	DVD (single and dual layer) 120 mm disc	--	X
CD	CD-R	X	X
	CD-RW (supports AM2)	X	X
	CD-ROM	--	X
	CD-ROM XA Mode2 (form 1, form 2)	--	X
	CD-Extra	--	X

DVD-RAM Media

There are two types of DVD-RAM media, in several different capacity configurations.

Type I DVD-RAM discs are inserted in a cartridge that protects the media from dust, scratches and other possible damage. Type I discs cannot be taken out of their cartridge and cannot be used in a DVD-ROM drive.

Type II DVD-RAM discs are also inserted in a cartridge for the same protective reasons, but Type II discs may be removed from the cartridge and read on a DVD-ROM drive (the DVD-ROM drive must have the ability to read DVD-RAM media, though).

Media Capacity	Size	Single-Sided	Double-Sided	Type I	Type II
1.46GB	8 cm	X	--	--	X
2.6GB	12 cm	X	--	X	X
2.92GB	8 cm	--	X	--	X
4.7GB	12 cm	X	--	X	X
5.2GB	12 cm	--	X	X	--
9.4GB	12 cm	--	X	X	--

RPC and DVD-Video

Nearly all commercially-available DVD discs feature a Region Protection Code (RPC). In order to watch DVD-Video discs, the RPC needs to match the setting on the DVD player. By default, all LaCie DVD-Video-compatible drives are set to the RPC zone of the country in which it was purchased. This RPC setting may be changed using your hardware or software MPEG-II decoder (please refer to the documentation supplied with your decoder for more information). DVD-Video discs that do not feature RPC II encoding may be played on all DVD players set to Zone 1.

The worldwide RPC zones are:

Zone 1	USA and Canada
Zone 2	Europe, Japan, the Middle East and South Africa
Zone 3	Southeast Asia (including Hong Kong)
Zone 4	Australia, New Zealand, Central and South America
Zone 5	Northwest Asia, North Africa
Zone 6	China

When you insert a DVD-Video disc into your drive for the first time, the hardware or software MPEG-II decoder will detect if the setting of your drive is the same as on the DVD-Video. If not, a message will appear on your screen and you will be asked to change the RPC setting of your drive.

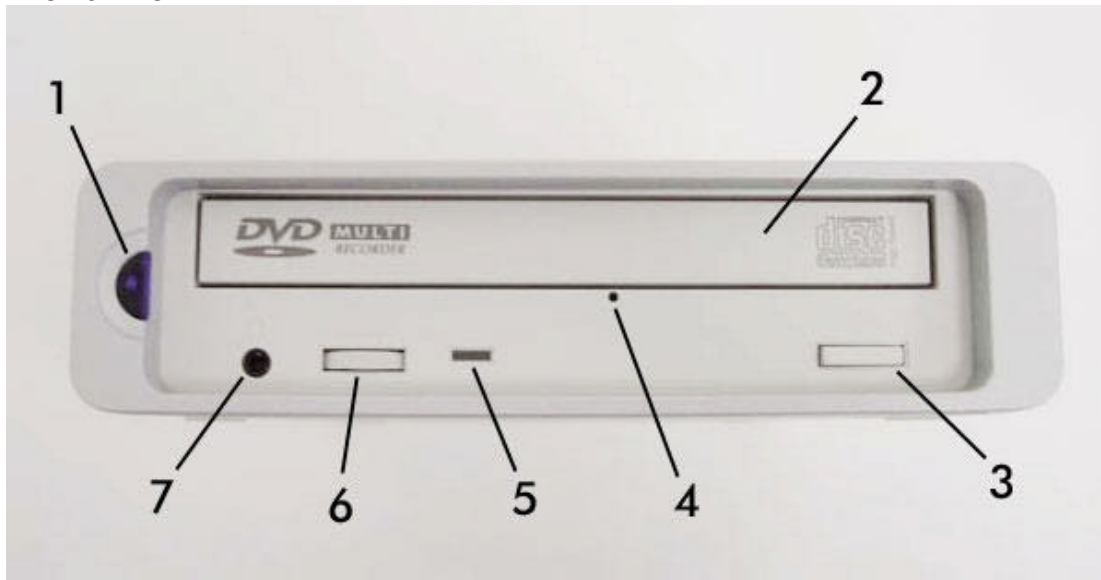


Important Note: *You can only change the RPC of your drive four times. The RPC setting is copied into an internal component in the drive. This chip makes an average of the first five readings and sets the drive to the most read zone. After this, it will not be possible to change or reset the RPC of the drive.*

Example: *You change the RPC Zone to play a Zone 1 DVD-Video, and then you change to a Zone 2 DVD-Video. You switch back and forth between the zones a total of five times, twice in Zone 1 and three times in Zone 2. Your drive will then be set on Zone 2, without the possibility to reset the drive later on in order to view DVD-Video discs from Zone 1.*

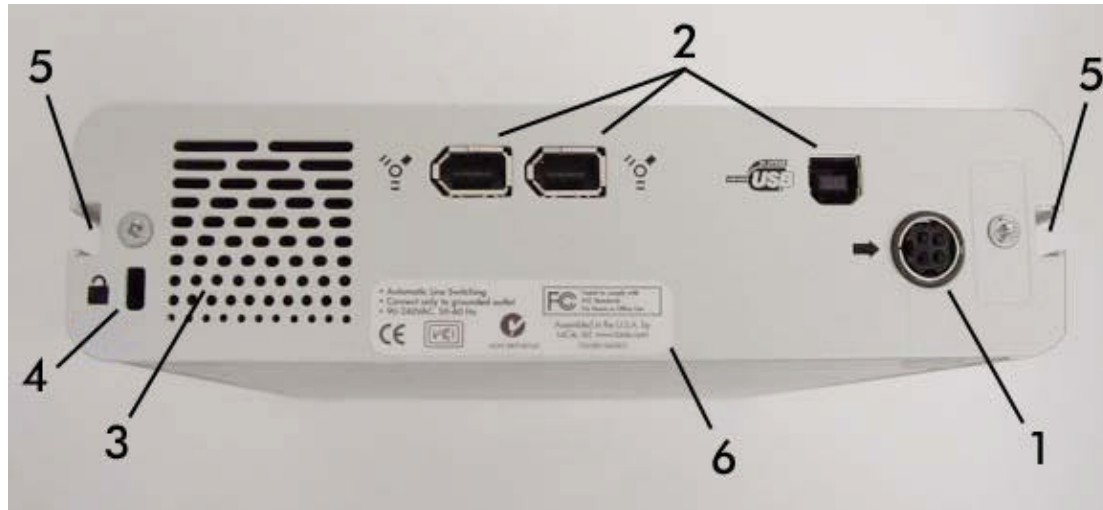
2.2 LaCie DVD Multi Drive – Views

Front View



1 – On/Off Button / Power LED	Use this button to turn your drive on and off. The Power LED lights up when the drive is turned on.
2 – Media Tray	Open the tray by pressing the load/eject button, then place a CD/DVD into the tray with the label facing up. Close the tray by pushing the load/eject button or pushing the front part of the tray.
3 – Load/Eject Button	Push this button to open the disc tray.
4 – Emergency Eject Hole	Insert a straightened paper clip (or similar object) and push to eject the tray if the load/eject button does not work. In normal operation, the eject button should always be used to unload the tray. If you must use the emergency eject hole, make sure the drive's power is turned off and wait until disc rotation has stopped.
5 – Disc LED	Lights when a disc is loaded into the drive, and lights in different patterns during operation.
6 – Volume Knob	Adjusts headphone volume level. Turn right to increase volume and left to decrease volume.
7 – Headphone Jack	To connect 3.5 mm mini-jack stereo headphones. Set volume to low before inserting headphones.

Back View



1 – Power Supply Connector	This is where you plug in the AC adapter supplied with the drive. See chapter 3. Setting Up Your LaCie DVD Multi Drive for details on connecting the adapter.
2 – USB and FireWire Connectors	This is where you plug in the USB 2.0 cable or FireWire cable furnished with your drive.
3 – Ventilation Outlet	Helps to keep your drive cool during operation. Be sure not to block this opening when using your drive.
4 – Lock Slot	This slot is used to connect a Kensington-type anti-theft system for maximum protection. Refer to your anti-theft system documentation for details on how to connect the lock.
5 – Rackmount Grooves	For mounting your drive with the rackmount kit (sold separately).
6 – Serial Number Sticker	This is where you will find your LaCie drive's serial number. Write down the serial number and keep it in a safe place, because you will need to provide the number in the event you have to call LaCie Technical Support for any reason in regard to the drive's performance. The serial number would also come in handy if your drive is lost or stolen.

Side View



1 – Rackmount Grooves
For mounting your drive with the rackmount kit (sold separately).

2.3 USB Cables and Connectors



Your LaCie drive is shipped with a USB 2.0-certified USB cable, to ensure maximum data transfer performance when connected to a USB 2.0 port. The cable will also work when connected to a USB 1.1 port, but drive performance will be limited to USB 1.1 transfer rates.

2.4 FireWire Cables and Connectors



There are three types of FireWire cables on the market: 6-to-4-pin, 6-to-6-pin and 4-to-4-pin. LaCie FireWire peripherals are supplied with a 6-to-6 pin FireWire cable. Most FireWire-equipped laptop computers feature 4-pin FireWire connectors, so to connect your LaCie drive to a laptop, you will need to purchase a 4-to-6-pin cable.



Important Note: *If the cable supplied with your LaCie drive does not meet your requirements, please contact your computer supply specialist.*

3. Setting Up Your LaCie DVD Multi Drive

Connecting the Power Supply

To operate the drive, you must use the AC adapter supplied with it.



Warning! Use only the AC adapter supplied with your LaCie drive. Using any other power cable may cause damage to the device and void your warranty.



Important Note: You may use your LaCie drive when in a foreign country, thanks to its autoswitching 100-240 Volt power supply. To be able to use this feature, you may need to purchase an appropriate adapter or cord. Consult LaCie Technical Support for assistance in choosing the right adapter. LaCie accepts no responsibility for any damage to the drive resulting from the use of an inappropriate adapter. Using an adapter other than one authorized by LaCie will void your warranty.

Connecting the AC Adapter to the Drive

1) Insert the round, four-pin metallic plug of the AC cable into the power input located at the rear of the drive.

2) Connect the wall-side plug to a power socket. Your drive should now turn on automatically when you connect it to a USB/FireWire port on your computer.

Disconnecting the AC Adapter From the Drive

If you have inserted a CD or DVD into the drive, you must first eject the media before disconnecting the power supply.

1) Turn the drive off.

2) Hold the drive steady with one hand, then remove the plug from the connector.



Warning! Always remove the AC adapter before transporting your LaCie drive. Failure to remove the adapter may result in damage to your drive and will void your warranty.

3.1 Installing Your DVD Multi Drive



Warning! Do not connect the USB and FireWire interfaces on your LaCie drive at the same time. Using one interface makes it unnecessary to simultaneously use the other interface. Choose to connect either the USB or FireWire cable.

3.1.1 Mac Users



Technical Information: Mac OS 9.x users with iTunes and Disc Burner: Your LaCie DVD Multi Drive should be recognized by iTunes and Disc Burner, Apple's native CD-recording software for Mac OS 9.x. You will be able to use these programs to burn CDs using your LaCie drive. For information on using this software, please refer to its user documentation.

We recommend, however, that you use the LaCie DVD Utilities for Mac, as they enable you to write to both CD-R/RW and DVD-R/RW media, which the Apple utilities do not. If you wish to use your LaCie DVD Rewritable Drive with iTunes, please do not install LaCie DVD Utilities for Mac.

Mac OS 9.x

- 1) After you have installed **Roxio Toast Lite**, with your computer powered on, plug the AC adapter into your LaCie drive and turn it on. Make sure the Power LED lights up, indicating that the drive is on.
- 2) Plug the USB or FireWire cable into the LaCie drive and into the connector at the back or side of your computer.
- 3) Find the **Roxio Toast Lite** folder icon on your hard disk, and double-click on it.
- 4) The **Toast Lite** directory will open. Double-click on the **Toast Lite** icon to launch the application. If your drive is recognized by the software, you are ready to burn a CD or DVD.

For instructions on how to use this program, please refer to the help and user documentation provided in the **Roxio Toast Lite** folder on the LaCie DVD Utilities CD-ROM.



Technical Information: Mac OS 9.x Users running Toast Lite: *If your LaCie drive is not recognized in Toast Lite, you may be experiencing an extension conflict between Toast Lite and iTunes or Disc Burner. There are two possible solutions to this problem.*

- If you do not plan on using iTunes or Disc Burner, follow these steps:
 - A) From the Apple Menu, go to Control Panels and open the Extensions Manager.
 - B) Scroll down to the Extensions folder, and disable (uncheck) the USB Authoring Support and the FireWire Authoring Support.
 - C) Click on the Restart button to restart your computer.
 - D) Launch Toast Lite again, and check to see if Toast Lite now recognizes the drive.
- If you plan on using both Toast Lite and iTunes or Disc Burner, you will need to create a separate Extension Set for Toast Lite.
 - A) From the Apple Menu, go to Control Panels and open the Extensions Manager.
 - B) Press the Duplicate Set button.
 - C) Give the new Extension set a name, such as "Toast."
 - D) Scroll down to the Extensions folder, and disable (uncheck) the USB Authoring Support and the FireWire Authoring Support.
 - E) Click on the Restart button to restart your computer.
- Now when you want to use this set, simply go back into Extensions Manager, and from the pull-down menu from Selected Sets:, choose your new Extension set.

Mac OS 10.x

- 1) Power on your computer and your LaCie drive.
- 2) Connect the USB or FireWire cable from your LaCie drive to a FireWire port on your computer.
- 3) Insert a disc in your LaCie drive. It will mount onto your Macintosh desktop, showing it is ready for use.
- 4) You will be able to burn CDs using Apple's iTunes and Disc Burner software. These programs do not enable you to burn DVD-R/RWs. For information on using these programs, please refer to their user documentation.



Important Note: You will find important information about the compatibility of LaCie DVD drives with Apple's iTunes, Disc Burner, iDVD and DVD Studio Pro software at www.apple.com.

3.1.2 PC Users

USB 2.0 Installation

Before connecting the drive to your computer, the USB 2.0 driver must be installed.

- 1) Insert the LaCie DVD Utilities CD in the CD/DVD-ROM drive.
- 2) Double-click on **My Computer** on the Windows desktop.
- 3) Right-click the LaCie Utilities CD, then click on **Explore**.
- 4) Double-click the **USB 2.0 Drivers Install** folder.
- 5) Double-click on the **LaCie_USB_Driver_Install.exe** icon. The **LaCie USB2 Storage Driver** screen will appear. Click on "Next."
- 6) Installation will finish automatically.
- 7) Once you have installed the USB 2.0 driver, power on your LaCie drive.
- 8) Connect the USB cable from your LaCie DVD Drive to a USB port on your computer.
- 9) On the Windows desktop, open **My Computer**. Windows will have assigned a drive letter and icon for your drive.
- 10) Put a CD/DVD in the drive to test the drive. If the CD/DVD mounts (if its name is visible), you are ready to install the LaCie DVD Utilities for Windows, which enables you to record onto DVD-RAM, DVD-R/RW and CD-R/RW media.

FireWire Installation

- 1) Turn on your computer. Wait until startup has completed.
- 2) Plug in the AC adapter to your drive and turn it on. Make sure that the Power LED comes on, indicating that the drive is powered up.
- 3) Connect the FireWire cable to your LaCie drive, and the other end to an available FireWire port on your computer.
- 4) Windows will detect the new device and load Microsoft's native driver for the LaCie drive. If this driver was not installed during the initial installation of Windows, you may be asked to insert your Windows installation CD-ROM in your computer's internal CD/DVD-ROM drive. After Windows is done, you may be asked to restart your computer.
- 5) On the Windows desktop, open **My Computer**. Windows will have assigned a drive letter and icon for your drive.
- 6) Put a CD/DVD in the drive to test the drive. If the CD/DVD mounts (if its name is visible), you are ready to install the LaCie DVD Utilities for Windows, enabling you to record onto DVD-RAM, DVD-R/RW and CD-R/RW media.



Technical Information: Windows 2000 Users! *You will have to force Windows 2000 to load the DVD-RAM device driver instead of the LaCie FireWire device driver. To do this, follow these steps:*

- A) Right-click on **My Computer**, then select **Properties**. Click on the **Hardware** tab, and then click on **Device Manager**.
- B) Open the **DVD/CD-ROM** drives icon and right click **LaCie 1394 DVD-RAM + DVD-R IEEE 1394 SBP2 Device** and select **Properties**.
- C) Click on the **Driver** tab and then the **Update Driver** button.
- D) The **Upgrade Device Driver Wizard** will open. Click on **Next**.
- E) Select "Display a list of known drivers for this device..." and click on **Next**.
- F) Select the **DVD-RAM Device** driver and click on **Next**. Another window will appear, and again click **Next** until the final screen appears, at which time click on **Finish**. After this, you will be asked to restart your computer.
- G) Once the computer has restarted, open up **My Computer**. Your LaCie drive will be recognized by Windows as two separate devices, and there should be two icons visible in **My Computer**: a CD-ROM icon and a Removable drive icon.

3.2 Initializing DVD-RAM Media

3.2.1 Mac Users

Mac OS 9.x

1) Insert the DVD-RAM disc into your LaCie DVD Multi Drive.

2) The following screen will automatically appear:



3) Type in a name for the DVD-RAM disc, and choose a file format: Mac OS Standard or Mac OS Extended (please refer to the [Technical Information](#) section for a detailed discussion on the differences between the two file formats). Click **Initialize** to continue.

4) Another screen will automatically appear, stating that “Initializing will erase all information on this disk.” Click **Continue** to initialize the disk.

5) Once you have formatted the DVD-RAM disc, you can use the LaCie drive like a hard drive; i.e. drag and drop files onto the disc icon to save them, and press “Delete” to erase files.

Mac OS 10.x

1) Insert the DVD-RAM disc into your LaCie DVD-R drive.

2) Mac OS will detect the unformatted disc and prompt you with the following message, “You have inserted a disk containing no volumes that Mac OS X can read. To use the unreadable volumes, click Initialize. To continue with the disk inserted, click Continue.” Click **Initialize**.

3) The **Disk Utility** screen will appear. Select the LaCie disk icon on the left side of the screen and click on the **Partition** tab.

4) In the **Partition** window, below **Volume Scheme:** is a pull-down menu, starting with **Current**. Select the number of partitions you want created from this menu. You must select a partition, from between 1 to 8, for initialization of the disk to continue. From the **Volume Information** section, you can name the volume. You will also need to choose the format from the pull-down menu, which starts with “Mac OS Extended (please refer to the [Technical Information](#) section for a detailed discussion on the differences between the file formats).”

5) Once you have set your parameters, click **OK**.

6) A **Warning** will pop up, stating that “Saving the new volumes will erase all existing volumes. This can NOT be undone. Are you sure you want to do that?” Click **Partition** to continue.

7) Initialization will then take place automatically.

8) Once you have formatted the DVD-RAM disc, you can use the LaCie drive like a hard drive; i.e. drag and drop files onto the disc icon to save them, and press “Delete” to erase files.

3.2.2 PC Users

Windows 98 SE and Windows Me

Before you can initialize DVD-RAM discs, you will need to install the necessary LaCie DVD-RAM drivers.

- 1) Insert the LaCie DVD Utilities CD-ROM into your computer's internal DVD/CD drive.
- 2) Open **My Computer**, then double-click on the icon for the LaCie DVD Utilities CD.
- 3) Double-click on the **LaCie DVD-RAM Drivers** folder, and click on the **Setup.exe** icon, then click the **Driver and Formatter Setup** button.
- 4) The InstallShield Wizard "Welcome" screen will appear, then click on the **Next** button.
- 5) Next, the **Software License Agreement** screen will appear. Take a moment to read the agreement, then click **Yes**.
- 6) The **Choose Destination Location** screen will appear. Choose the default folder unless you have a specific reason for choosing another destination. Click on the **Next** button.
- 7) The **Select Program Folder** screen appears. Choose the default folder unless you have a specific reason for choosing another destination. Click on the **Next** button.
- 8) The **Start Copying Files** screen appears, click "Next" to begin this process.
- 9) The "Readme" file will be displayed. Please take a moment to completely read this information, then close the window to continue.
- 10) The **Setup Complete** screen will appear, and you will be prompted to restart your computer. Click **Finish** and allow your computer to be restarted.
- 11) After your computer has restarted, you can access the DVD-RAM disc formatting utility by the following: **Start > Programs > DVD-RAM > DVD-RAM Driver > DVD Form**.
- 12) Once you have formatted the DVD-RAM disc, you can use the LaCie drive like a hard drive; i.e. drag and drop files onto the disc icon to save them, and press "Delete" to erase files.

For instructions on using this utility, as well as important information regarding various DVD-RAM disc formats, please refer to the "DVD-RAM Format Help File," available at the following: **Start > Programs > DVD-RAM > DVD-RAM Driver > Help for DVD Form**.

Windows 2000 and Windows XP

Before you can initialize DVD-RAM discs, you will need to install the necessary LaCie DVD-RAM drivers.

- 1) Insert a DVD-RAM disc into your LaCie DVD-Multi drive.
- 2) Open **My Computer**, then double-click the “LaCie DVD Utilities” CD icon.
- 3) Double-click on the **DVD-RAM Drivers** icon and then open the **Win2K** folder.
- 4) Select the language you will use for installation.
- 5) Open the **Driver** icon, and then double-click the **Setup.exe** icon and click on the **DVD-RAM Driver Setup** button.
- 6) The InstallShield Wizard “Welcome” screen will appear, then click on the **Next** button.
- 7) Next, the **Software License Agreement** screen will appear. Take a moment to read the agreement, then click **Yes**.
- 8) The **Choose Destination Location** screen will appear. Choose the default folder unless you have a specific reason for choosing another destination. Click on the **Next** button.
- 9) The **Select Program Folder** screen appears. Choose the default folder unless you have a specific reason for choosing another destination. Click on the **Next** button.
- 10) The **Start Copying Files** screen appears, click **Next** to begin this process.
- 11) The “Readme” file will be displayed. Please take a moment to completely read this information, then close the window to continue.
- 12) The **Setup Complete** screen will appear, and you will be prompted to restart your computer. Click **Finish** and allow your computer to be restarted.
- 13) After your computer has restarted, you can access the DVD-RAM disc formatting utility by the following: **Start > Programs > DVD-RAM > DVD-RAM Driver > DVD Form**.
- 14) Once you have formatted the DVD-RAM disc, you can use the LaCie drive like a hard drive; i.e. drag and drop files onto the disc icon to save them, and press “Delete” to erase files.

For instructions on using this utility, as well as important information regarding various DVD-RAM disc formats, please refer to the “DVD-RAM Format Help File,” available at the following: **Start > Programs > DVD-RAM > DVD-RAM Driver > Help for DVD Form**.



Technical Information: Windows XP Users! *In Windows XP, you will need to use Window's **Disk Management Utility** to format your DVD-RAM media.*



Important Note: *The following steps are based off of the default Windows XP "Theme" settings.*

- 1) Insert a DVD-RAM disc into your LaCie DVD Multi Drive.*
- 2) Go to Start > Control Panel > Performance and Maintenance > Administrative Tools > Computer Management > Disk Management.*
- 3) Right-click on the icon for the LaCie drive and select Format.*
- 4) Choose the default settings, unless you have a specific reason for choosing other settings, and click OK to begin formatting the disk.*
- 5) Once you have formatted the DVD-RAM disc, you can use the LaCie drive like a hard drive; i.e. drag and drop files onto the disc icon to save them, and press "Delete" to erase files.*

For more information on using Window's Disk Management utility, please refer to your Windows XP documentation or online help.

3.3 Installing Multiple USB Peripherals

Technically, you can connect up to 127 individual USB peripherals at one time. However, you probably will not use more than 6 to 8 peripherals on your USB system. Most computers only have two USB ports, so you would need a hub to connect more than two peripheral drives. The hub regenerates the signals, generally providing between 4 to 7 connections. To add even more drives, connect a new hub to a connector of the original hub, creating a new series of peripherals, etc. But the hub slows down the transfer rate by lengthening the path of the signal. To optimize performance, connect your drive directly to one of the built-in ports in your computer.

3.4 Installing Multiple FireWire Peripherals

FireWire allows for the connection of up to 63 devices on the bus, with a maximum of 16 devices on one branch. FireWire devices can be connected on a chain and do not necessarily need a hub. Simply connect the first peripheral to a FireWire port on your computer. Connect the second peripheral to the other FireWire port on the first drive etc., using the cables provided with your drives.

3.5 Disconnecting Your LaCie DVD Multi Drive

USB and FireWire external devices feature "plug & play" connection. This means that your drive can be connected and disconnected while the computer is running. To prevent failures, it is important you follow these steps when disconnecting your U&I device.



Warning! Do not disconnect the USB or FireWire cable when the drive is reading or writing to a disc. Disconnecting while the drive is operating could cause the destruction of data or damage the drive itself. Make sure that your drive is not reading or writing and that the activity LED is off before disconnecting the USB or FireWire cable.

Mac Users

You must unmount the drive before disconnecting it or powering it down. Drag the DVD drive icon to the trash. The drive can now be disconnected.

PC Users



Important Note: Windows 98 SE Users: If you have installed the Windows Storage Supplement Update, you will have to unmount the drive before disconnecting it or powering it down. If you have **not** installed the update, simply disconnect the drive when it is not active. No unmounting is required.

- 1) From the **System Tray** (located in the lower right-hand side of your screen), click on the **Eject** icon (a small green arrow over a hardware image).
- 2) A message will appear, detailing the devices that the **Eject** icon controls, i.e. "Safely remove..." Click on this prompt.
- 3) You will then be given the following message: "Safe to Remove Hardware" (or similar). It is now safe to disconnect the device.

3.6 Switching Between USB2.0 and FireWire Connections

Both USB 2.0 and FireWire are "hot-pluggable," meaning that you can connect a drive to a USB or FireWire port on your computer even when the computer is running. However, there are important steps to follow for your drive to function properly. When changing from a USB 2.0 connection to a FireWire connection (and vice versa), follow these steps:

- 1) Follow the steps in section [3.5 Disconnecting Your LaCie DVD Rewritable Drive](#) to unmount the drive.
- 2) Disconnect the USB or FireWire cable.
- 3) Power down your drive and physically disconnect the power cable from the drive.
- 4) Reconnect the power cable and turn the drive's power back on.
- 5) Connect either the USB or FireWire cable.

After switching between interfaces, you may need to quit the application that you were using to access the drive and then reboot the program. The drive should then be visible and accessible.

4. Using Your LaCie DVD Multi Drive

4.1 Inserting DVD-RAM, DVD and CD Media

1) To insert a DVD-RAM cartridge or disc, push the load/eject button on your LaCie DVD Multi Drive.

2) For a DVD-RAM cartridge, insert the cartridge with the label facing up. Push the cartridge about 2cm towards the drive and press gently on the label so that the cartridge sits firmly on the tray.

For a CD or DVD disc, insert the DVD/CD media into the tray with the label side facing up. Make sure the DVD/CD is correctly placed in the center of disc tray.

3) Gently push in the disc tray or push the load/eject button to close it.

4.2 Ejecting Media



Warning! Do not attempt to open the drive's media tray or remove the DVD/CD while the unit is in use and being accessed by the computer. You may injure yourself, and damage the drive and/or your computer system.



Warning! Do not transport the drive with the tray open or with a DVD/CD inside it. Doing so may damage the drive and/or data stored on the disc, and will void your warranty.

4.2.1 Mac Users

Drag the DVD/CD icon on the desktop to the **Trash**. The LaCie DVD Rewritable Drive's tray will then open. Remove the DVD/CD. Gently push in the disc tray or push the load/eject button to close it.

4.2.2 PC Users

After you have finished using the DVD drive and the computer is no longer accessing it, push the load/eject button. When the disc tray is fully open, remove the DVD/CD. After removing the disc, gently push in the disc tray or push on the load/eject button to close it.

You can also go into **My Computer** and right click the DVD/CD drive icon. In the drop-down menu that follows, select the **Eject** option. The disc tray will open, then you can access your media.

4.3 Emergency Ejection of Media



Warning! Make sure the DVD drive is off and the power unplugged before attempting the emergency ejection procedure.

In the event that a DVD/CD cannot be ejected with the load/eject button and the software is not controlling the drive, use the emergency eject operation to open the disc tray. First, switch off your computer and the DVD drive and unplug the drive's power.

On the front of the drive is the **Emergency Eject Hole**. Insert a small metal poker, such as an unbent paper clip, into the Emergency Eject Hole until the poker presses against the manual eject mechanism. You will feel the mechanism eject the disc tray. Only use this method when the load/eject button is not working.

4.4 Read Mode

4.4.1 Mac Users

The DVD/CD volume will appear as an icon on the Desktop. Click on the icon to have access to the contents of the CD.

4.4.2 PC Users

The DVD/CD volume will appear in **My Computer**. Click on **My Computer** to view the contents of the CD and to have access to the folders and files on it.

You can also gain access to the files and folders contained on the disc by going into Windows Explorer and clicking on the CD/DVD-ROM drive icon.

4.5 Write Mode

Please refer to the individual software programs user's guide for information on how to best use your DVD drive in write mode.

5. Technical Information

The following technical information relates to your LaCie DVD Multi Drive and gives some practical advice:

Power Autoswitching

Your LaCie DVD Multi Drive comes with an autoswitching power supply. This means that if the drive is connected to a USB/FireWire connector on your computer, when you turn off the computer, the LaCie drive will turn off automatically. Likewise, when you turn on your computer, your LaCie drive will turn on automatically.

Power Save

The LaCie DVD Multi Drive manages power consumption. If the system's power save feature supports it, the drive will spin down during the power save mode. After the system comes out of power save, the drive will take a few seconds to spin up to full power before it can be accessed.

5.1 User Advice When Using USB 2.0 or FireWire



Technical Information: USB 2.0 Host Bus Adapters and Performance

At the time of publication (November 2002), Mac OS does not support USB 2.0 functionality, and the USB 2.0 interface is not a standard feature implemented on the motherboards of all PC-compatible computers. Future versions of Windows will include USB 2.0 drivers to automatically manage USB 2.0 devices. For the most up-to-date information on USB 2.0 driver availability, we advise you to check the Microsoft and Apple Web sites regularly.

To utilize the newly enhanced USB 2.0 performances, your computer must be equipped with a USB 2.0 host bus adapter card (sold separately, or integrated by your PC manufacturer) and the appropriate drivers. These host bus adapter cards, which include one or more USB ports, are shipped with special USB 2.0 drivers that enable the computer to control the card. These drivers must be installed in order for USB 2.0 devices connected to the port to work at their correct speeds. For installation instructions, please refer to the documentation that comes with the host adapter card.

LaCie supplies only the appropriate USB 2.0 drivers for its peripherals and does not provide drivers for third-party host adapter cards. To obtain the right drivers for your host adapter card, visit your card manufacturer's Internet site.

5.1.1 Data Transfers

During data transfers, it's best to wait before launching other applications on the same USB or FireWire port. Anomalies may arise with computers that have USB or FireWire controllers that do not conform to OHCI (Open Host Controller Interface) standards. In any other configurations, we cannot ensure 100% correct operation. Due to this, you may encounter hanging problems. If this happens, proceed as follows:

1) Make sure that the USB or FireWire cable is connected tightly and securely on both ends of the cable, from the drive to the computer. If you are using a USB or FireWire cable other than the one supplied with your LaCie drive, check that your USB or FireWire cable is properly certified. The cable that is provided with your LaCie drive is USB or FireWire certified.

2) Check that the power supply and ground are seated properly.

3) Disconnect your computer's USB or FireWire cable. Wait 30 seconds and reconnect it.

4) Check the Windows 98 SE version installed on your computer. Supported versions of Windows 98 SE are 4.10.2222A and above. To check the version number, you need to execute the program **Systems**.

5) To proceed, launch the following command from the Windows **Task Bar: Start > Settings > Control Panel > System**.

If your drive is still not recognized or if you encounter any difficulties, check the type of USB or FireWire controller available in your computer. You can access it from the **Task Bar** of Windows. Proceed as follows:

1) Double click on **Start**:

- a- Double click on **Settings**
- b- Double click on **Control Panel**
- c- Double click on **System**

2) Go to Peripheral manager and double click on either **USB Bus Controller** or **IEEE 1394 Bus Controller**.

3) The USB or FireWire controller type appears on the second line.

4) Double click on this line and note the information which follows in order to communicate it to LaCie Technical Support:

- Peripheral type
- Manufacturer
- Equipment version
- Peripheral state



Important Note: Windows 98 SE Users: Microsoft has released an IEEE 1394 Storage Supplement update to enhance compatibility and help alleviate lock-ups. Check Microsoft's Web site, support.microsoft.com, for more information.

5.2 USB 2.0 vs. FireWire

Trying to decide which interface to use, USB 2.0 or FireWire, can be a complicated decision. Your decision should be based on the following:

Computer With USB 2.0 and FireWire Ports	If your computer is equipped with both USB 2.0 and FireWire ports, drive performance will be relatively similar. The theoretical transfer rates are 480Mb/s for USB 2.0 and 400Mb/s for FireWire. Realistically, the two are extremely close to each other in terms of performance and speed. The main reason for choosing one over the other should be hinged on the existing devices you are already using. For instance, if you are already using both of your USB 2.0 ports on your computer, you would use the FireWire port to connect your drive, and vice versa. Avoiding hubs (for USB topology) and daisy-chains (for FireWire topology) will help improve performance because your drive will be connected directly to your computer.
Computer With USB 1.1 and FireWire Ports	If your computer is equipped with a USB 1.1 port and a FireWire port, you will get noticeably better performance by using the FireWire connection. Even though your LaCie drive comes with a USB 2.0 cable and interface, by connecting through the USB 1.1 port, the drive will be limited to USB 1.1 speeds and performance.
Computer With Only USB1.1 Ports	If your computer is only equipped with a USB 1.1 port, your decision is fairly simple: connect via the USB cable provided with your drive. USB 2.0 is backward compatible and can be used in USB 1.1 ports. Again, you will be limited to USB 1.1 speeds and performance. Another alternative is to purchase a FireWire or USB 2.0 host adapter card that you would install into a PCI or PCMCIA slot on your computer, thereby allowing your computer to take advantage of the performances that FireWire and USB 2.0 have to offer.

5.3 User Advice on MPEG-II Decoders

All DVD-Video material is compressed using MPEG-II compression. DVD-Video, with full-motion video and multi-channel sound (multi-lingual soundtracks, surround sound, etc.), is a data-hungry application. Without compression, you would only be able to fit a 5-minute movie onto a 4.5GB disc. MPEG-II compression allows you to fit a full-length feature film, plus bonus material, on just one disc.

In order to play DVD-Video discs using your LaCie DVD Multi Drive, you need to have an appropriate MPEG-II decoder. You have two options:

- 1) Install the MPEG-II decoder software (WinDVD) if your PC is equipped with a processor that is 400MHz or faster. The decoder software will give you smoother images when playing DVD-Video discs using your drive (as with any application, the more RAM you have, the better playback performance will be).
- 2) Purchase and install a PCI MPEG-II decoder card if your PC is equipped with a processor that is 400MHz or slower. The decoder card should help you obtain better performance during playback with your LaCie drive.

5.4 FAT 32 vs. NTFS

There are basically two file system formats: **FAT 32** and **NTFS**. Performance is very similar between the two systems, and the following information will hopefully make choosing one or the other a little easier.

FAT 32	FAT is an acronym for File Allocation Table, which dates back to the beginnings of DOS programming. Originally, FAT was only 16 bits, but after the second release of Windows 95 it was upgraded to 32 bits, hence the name FAT 32. In theory, FAT 32 volume sizes can range from less than 1MB all the way to 2TB. It is the native file system of Windows 98 and Windows Me, and is supported by Windows 2000 and XP. When FAT 32 is used with Windows 2000 and XP, though, volume size is limited to 32GB (by the Windows partition utility, i.e. Disk Manager), and the individual file size is limited to 4GB.
NTFS	This acronym stands for New Technology Filing System, and it is the native file system for Windows NT, Windows 2000 and XP. NTFS offers several features that are not available with FAT 32; i.e. file compression, encryption, permissions, and auditing, as well as the ability to mirror drives and RAID 5 configurations. The minimum supported volume size for NTFS is 10MB, with a maximum of 2TB, with no limit to file size. Volumes created in NTFS can only be directly accessed (not through shares) by Windows NT, Windows 2000 and XP, without resorting to help from third-party products.

Guidelines for Choosing FAT 32 or NTFS

Use FAT 32 if:	· You will be dual booting with an Operating System other than Windows NT or Windows 2000. · You want to access the stored volumes on any Operating System other than Windows NT, Windows 2000 or XP. · You may need the ability to dual boot down the line. Once you have converted a volume from NTFS to FAT 32, there is no going back. You can convert from FAT 32 to NTFS, but not the other way around.
Use NTFS if:	· You want to encrypt files, assign permissions to files, or want to audit files for access. · You will be formatting partitions larger than 32GB. · You need to store individual files that are larger than 4GB. · You need a filing system that can be mirrored or structured like a RAID 5 configuration.

5.5 Mac OS Standard vs. Mac OS Extended

There are basically two file systems for the Mac OS: Mac OS Standard (HFS) and Mac OS Extended (HFS+).

Mac OS Standard

Mac OS Standard refers to the file system used by Mac OS 8.0 and earlier. This was the original Hierarchical File System employed by Apple, and was used before computers really began to see dramatic increases in hard disk drive sizes. In HFS, the disk is divided into a maximum of 65,536 equal-sized blocks, with these blocks being the destination point of data stored by the Mac.

Initially, these spaces were small, due to the lack of size in hard drives (i.e. hard drives smaller than 1GB), but as hard drive space increased, the file system became inefficient. With HFS, even the smallest file on any disk has to occupy at least one block. For example, if you had a 4GB hard drive and divided it by 65,536, that would equal roughly 64K, and that would be the smallest block size under HFS. So, if you had a file that was only 4K, it would still have to occupy 64K.

Mac OS Extended

Mac OS Extended refers to the file system used by Mac OS 8.1 and later. HFS+ represents an optimization of the older HFS file system by using hard disk space more efficiently. As hard disk capacity increased over the years, Apple realized that they needed to improve the space-saving capabilities of their file system. Building off of HFS, they increased the number of blocks from 65,536 to 4.29 billion. With HFS+, you are no longer limited by block size. Now, for example, if you have a 4K file, it will only take up 4K of space.

Guidelines for Choosing Mac OS Standard or Mac OS Extended

This is actually a fairly easy decision. You should only use Mac OS Standard if you are creating a volume smaller than 32MB, you are using a Mac with a 680X0 processor or you are creating a file structure that will need to be used by Macs using Mac OS 8.0 or earlier. Otherwise, you should select Mac OS Extended.

6. Troubleshooting

In the event that your LaCie DVD Multi Drive is not working correctly, please refer to the following checklist to find out where the problem is coming from. If you have gone through all of the points on the checklist and your drive is still not working correctly, please have a look at the FAQs that are regularly published on our Web site – www.lacie.com. One of these FAQs may provide an answer to your specific question. You can also visit the drivers pages, where the most recent software updates will be available.

If you need further assistance, please contact LaCie Technical Support (see [7. Contacting Customer Service](#) for details).

The Problem	Questions to Ask	Possible Solutions
The drive is not recognized.	Does an icon for the drive appear on the computer? (On a Mac a CD/DVD-ROM must be inserted in the drive)	Check for an icon on the Desktop (on a Mac) or in My Computer (on a PC).
	Is the drive powered up?	Check the drive's power cable. Make sure the Power LED is on.
	Are both ends of the USB/FireWire cable connected and properly seated?	Check both ends of the USB/FireWire cable. Disconnect them, wait 10 seconds, and reconnect them. If the drive is still not recognized, restart your computer and try again.
	Are you using Mac OS?	You may need to disable some Mac OS Authoring Support extensions for Toast to be able to control the drive. Use the Extensions Manager to disable the following extensions: · Authoring Support v1.1.2 or newer, · Disc Burner Extension v1.0.2 or newer, · FireWire Authoring Support v1.1.2 or newer, · USB Authoring Support v1.1.2 or newer. The check box next to the extension should be disabled (unchecked).
	Is there a conflict with other device drivers or extensions?	Contact LaCie Technical Support.

Are the USB/FireWire drivers installed correctly and enabled?

Windows 98 SE & Me

Users: Go to Start > Settings > Control Panel > System > Device Manager > USB Controller or IEEE 1394 Controller > click on the plus sign next to the controller icon, and you should see your device listed.

Windows 2000 Users: Go to Start > Settings > Control Panel > System > Hardware tab > Device Manager button > USB Controller or IEEE 1394 Controller > click on the plus sign next to the controller icon, and you should see your device listed.

Windows XP Users: Go to Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager button > USB Controller or IEEE 1394 Controller > click on the plus sign next to the controller icon, and you should see your device listed.

If you cannot see the device, recheck the cables and try the other troubleshooting solutions listed here.

Mac Users: Open Apple System Profiler and click on the Devices and Volumes tab. If your device is not listed, recheck the cables and try the other troubleshooting solutions listed here.

The drive's media tray will not open.	Is the drive being accessed for read or write operations?	Check to see if the drive's read/write activity LED is blinking.
	Is the drive turned on?	Make sure the Power LED is on.
	Are you using a Macintosh?	Drag the Disc icon onto the Trash icon. The disc will eject automatically.
	Has a running software program locked the eject function?	To check, disconnect the interface and power cables of the drive, reconnect only the power cable, and press the eject button.
The drive does not write to DVD-RAM media correctly.	Are you using the right type of DVD-RAM media?	Check 2.1 Minimum System Requirements – Supported DVD/CD Formats for the formats supported by your drive.
The drive automatically ejects a CD or DVD when you try to record on it.	Is the CD/DVD already full?	Verify the contents of the CD/DVD and try recording on a blank one.
	Does the DVD-RW drive support the format of the CD/DVD you have inserted?	Check 2.1 Minimum System Requirements – Supported DVD/CD Formats for the formats supported by your drive.
	Is the CD/DVD media damaged?	Carefully inspect the disc. If in doubt, try another CD/DVD disc.
The drive is not writing to CD, DVD-R/DVD-RW media correctly.	Has Toast Lite (Mac) or Easy CD Creator (PC) been installed correctly?	Reinstall Toast Lite or Easy CD Creator.

	Has buffer underrun occurred (has something interrupted the stream of data to the recorder)?	· Disable all other software programs that are running during the CD recording session. · Disconnect the network, if you are using one. On a Mac, deactivate File Sharing. · Check to see that your hard drive is fast enough. · If recording from CD or DVD-ROM to CD, make sure that the speed of the source device is high enough to provide a sufficient data stream to the LaCie drive. Reduce the write speed of the LaCie drive using the appropriate menu in Toast Lite or Easy CD Creator.
	Is the CD-R/CD-RW media bad or scratched?	Check your CD-R/CD-RW media and try writing to a different disc.
	Are you using the right type of DVD-R/DVD-RW media?	Make sure that you are using DVD-R/DVD-RW General use media. DVD-R/DVD-RW Authoring media cannot be written to using your LaCie drive.
The drive automatically ejects a DVD/CD when you insert it.	Does the drive support the format of the DVD/CD you have inserted?	Check 2.1 Minimum System Requirements – Supported DVD/CD Formats for the formats supported by your drive.
	Is the DVD/CD media damaged?	Try another DVD/CD disc.
DVD-Video playback will not work on a Mac.	This is normal. For legal reasons, your LaCie DVD Rewritable Drive cannot currently be used for DVD-Video playback on a Mac.	
DVD-Video playback will not work in Windows.	Have you installed the appropriate MPEG-II decoder software?	Check that WinDVD has been installed correctly.

	Do you have a Pentium II 350 MHz (or equivalent) processor or greater?	Check your processor (Start > Settings > Control Panel > System > General tab.) If your processor does not meet the minimum requirements, you may need to purchase an MPEG-II decoder card. Consult your computer supply specialist for details.
	Has the LaCie drive been set as the default DVD drive in WinDVD?	See the LaCie DVD Multi Drive Software Guide, as well as the WinDVD online help.
	Are you running other software programs simultaneously?	Check to see if other programs are running. If so, close them. Depending on your computer's configuration, playback may be possible only if the DVD player software is the only program running.
DVD playback is not as smooth as it should be.	If using Windows, do you have a Pentium II 350 MHz (or equivalent) processor or greater?	Check your processor (Start > Settings > Control Panel > System > General tab.) If your processor does not meet the minimum requirements, you may need to purchase an MPEG-II decoder card. Consult your computer supply specialist for details.
	Are you running other software programs simultaneously?	Check to see if other programs are running. If so, close them. Playback may become smoother when only the DVD player software is running.

7. Contacting Customer Support

Before You Call Technical Support

- 1) Read the manual and review the Troubleshooting section.
- 2) Try to isolate the problem. If possible, make the drive the only external device on the CPU, and make sure all cables are correctly and firmly attached.

If you have asked yourself all of the pertinent questions in the troubleshooting checklist, and you still can't get your LaCie drive to work properly, call us directly using the number below. Before calling, make sure that you are in front of your computer and that you have the following information on hand:

- 1) Your drive's serial number
- 2) Computer brand and model
- 3) Operating system and version (Mac OS or Windows)
- 4) Amount of memory installed
- 5) Names of CD or DVD drives installed on your computer
- 6) Names of any other devices installed on your computer

Technical Support Help Hours

LaCie Australia - Monday through Friday, 9:30AM – 5:30PM EST Contact Us At: (61)2 9669 6900 phone - support.au@lacie.com	LaCie Belgium - Monday through Friday, 9AM – 5PM Contact Us At: 32 (0) 2 639 14 71 - support.be@lacie.com
LaCie Canada - Monday through Friday, 9:30AM – 5:30PM EST Contact Us At: (416) 530 2545 phone (416) 530 2546 fax - support.ca@lacie.com	LaCie Denmark - Monday through Friday, 9AM – 5PM Contact Us At: 45 70 27 65 43 - support.nordic@lacie.com
LaCie France - Monday through Friday, 9AM – 5PM Contact Us At: 33 (0) 1 69 32 84 23 - support.fr@lacie.com	LaCie Germany - Monday through Friday, 9AM – 5PM Contact Us At: 49 (0) 211 30 121-111 - support.de@lacie.com

LaCie Italy - Monday through Friday, 9AM – 6PM Contact Us At: 39 02 89 14 09 20 - support.it@lacie.com	LaCie Japan - Monday through Friday, 9AM – 5PM Contact Us At: 81 3 5733 2205 - support.jp@lacie.com
LaCie Netherlands - Monday through Friday, 9AM – 5PM Contact Us At: 31 (0) 713 326 833 - support.nl@lacie.com	LaCie Nordic (Finland, Norway and Sweden) - Monday through Friday, 9AM – 5PM Contact Us At: 46 (0) 8 411 60 02 - support.nordic@lacie.com
LaCie Spain - Monday through Friday, 9AM – 2PM, and 4PM – 7PM Contact Us At: 34 91 323 83 11 - supporte@lacie.com	LaCie Switzerland - Monday through Friday, 9AM – 5:30PM Contact Us At: 41 (0) 61 386 80 45 - support.ch@lacie.com
LaCie United Kingdom & Ireland - Monday through Friday, 9AM – 5PM Contact Us At: 44 (0) 20 7872 0872 - support.uk@lacie.com	LaCie USA - Monday through Friday, 6AM – 6PM PST Contact Us At: 503-844-4503 phone 503-844-4505 fax - support@lacie.com

7.1 Warranty

LaCie warrants your drive against any defect in material and workmanship, under normal use, for the period designated on your warranty certificate. In the event this product is found to be defective within the warranty period, LaCie will, at its option, repair or replace the defective drive.

This warranty is void if:

- The drive was operated/stored in abnormal use or maintenance conditions;
- The drive is repaired, modified or altered, unless such repair, modification or alteration is expressly authorized in writing by LaCie;
- The drive was subjected to abuse, neglect, lightning strike, electrical fault, improper packaging or accident;
- The drive was installed improperly;
- The serial number of the drive is defaced or missing;
- The broken part is a replacement part such as a pickup tray, etc.
- The tamper seal on the drive casing is broken.

LaCie will not, under any circumstances, be liable for direct, special or consequential damages such as, but not limited to, damage or loss of property or equipment, loss of profits or revenues, cost of replacement goods, or expense or inconvenience caused by service interruptions.

Under no circumstances will any person be entitled to any sum greater than the purchase price paid for the drive.

To obtain warranty service, call LaCie Technical Support. You may be asked to furnish proof of purchase to confirm that the drive is still under warranty.

All drives returned to LaCie must be securely packaged in their original box and shipped with postage prepaid.

Register online for free technical support: www.lacie.com/register.htm

8. Appendix 1 – USB 2.0 Questions & Answers

What are the benefits of the USB interfaces?

The USB 1.1 and 2.0 interfaces provide many of the same benefits, particularly:

- They are based on serial bus technology.
- Cross-platform capabilities: you can use your USB peripherals on both Mac and Windows platforms.
- “Plug and Play” capability: this incredibly convenient function eliminates any need to turn off or restart the computer when connecting a new peripheral. Just plug it in and off you go.
- Automatic configuration: your new device is automatically recognized and installed by your operating system, which makes setting up and using your peripherals a snap.
- The ability to connect several peripherals on the same bus: with USB ports on your computer, you can connect up to 127 peripherals using hubs.
- No need for peripheral addresses or terminators, easy-to-install cables and other features.

What is the difference between USB 1.1 and USB 2.0?

The main difference is speed. USB 1.1, the original version of the interface, is capable of throughput up to 12Mb/s. USB 2.0 supports data speeds up to 480 Mb/s, making it 40 times faster than its predecessor. This increased bandwidth translates into higher performance in demanding applications requiring high transfer rates.

What are the ideal uses for USB 1.1?

USB 1.1 is ideal for more traditional connections such as keyboards, mice, joysticks and scanners. With its 12Mb/s speed, it can also be used for more advanced applications such as games and audio software, as well as storage on hard disks, CD-RW, and other drives. USB 2.0 devices will have far superior performance in these more demanding applications, however.

What are the ideal applications of USB 2.0?

Except low-end devices, such as mice and keyboards, virtually any hardware will benefit from the extra bandwidth provided by USB 2.0. PC video conferencing applications will be further enhanced by the usability of USB 2.0 digital video cameras. The new breed of USB 2.0 video capture adapters will enable professionals and consumers alike to record the highest video quality possible. USB 2.0 scanners will raise the performance bar by offering speeds that match SCSI and FireWire scanners, at a more affordable price. And USB 2.0 storage devices, such as CD-RW, DVD-RAM and DVD-R/RW, and removable cartridge drives, will also benefit from the new I/O performance.

Will USB 1.1 devices run faster when connected to a USB 2.0 bus?

Unfortunately, no. The USB 2.0 specification is specifically written to allow developers to design higher speed peripherals that can take advantage of the extra bandwidth. USB 1.1 devices, though, will still operate at 12Mb/s at full-speed and 1.5Mb/s at low-speed on a USB 2.0 bus. Even though USB 1.1 devices won't run any faster, they can work alongside USB 2.0 devices on the same bus. However, if you plug in a USB 2.0 device to a USB 1.1 bus, the speed of the USB 2.0 device will decrease to 12Mb/s.

What is a USB hub? Will USB 2.0 devices work on USB 1.1 hubs and vice versa?

You can connect up to 127 devices to a single USB bus. For more than two devices, you must make new connections using a peripheral called a "hub." A hub, which you hook up directly to a USB connector on your computer, usually has 4 or 7 output connections enabling you to connect the same number of peripherals. One of the hub's main functions is to regenerate signals that lose part of their strength as they are transmitted via the USB cable. By connecting yet another hub to a connector on the existing hub, you can then plug in a new set of peripherals and so on, up to a maximum of 127.

You can use your USB 2.0 devices with USB 1.1 hubs, but the peripherals will be limited to USB 1.1 performance levels. In the near future, USB 2.0 repeaters will be available, able to communicate in three modes: high-speed (480Mb/s), full-speed (12Mb/s), and low-speed (1.5Mb/s). As USB 2.0 is backward compatible, you will be able to connect USB 1.1 devices to USB 2.0 hubs; however, the USB 1.1 devices will still maintain their normal performance levels (i.e. 12 Mb/s).

In practice, users who desire enhanced USB 2.0 throughput will need to connect their USB 2.0 hardware on both ends of a 2.0 hub to achieve the "high-speed" mode. On one end, a USB 2.0 compliant host controller resides on the host PC to manage the enumeration process and power management. On the other end, USB 2.0 hardware must be connected directly to the root hub or through a USB 2.0 hub.

Some hubs have no power supply and others are self-powered. When you choose a hub, opt for the self-powered variety, as they have their own AC adapter. The most powerful hubs provide 0.5A of power to each port.

If you buy a hub, make sure that it supports per-port switching. This function prevents the entire chain of peripherals from freezing up if one of them is not working properly or is down.



Important Note: Avoid using USB connectors found on certain peripherals such as keyboards. These are passive (or pass-through) connectors that lead to power loss and unstable operation.



Important Note: Only use USB cables shorter than 5 meters (approximately 15 feet). Using longer cables cause the peripherals to malfunction due to excessive reduction in electrical signal strength.

You will find additional information at the following Internet address:

<http://www.lacie.com/usb>

9. Appendix 2 – FireWire Questions & Answers

What does IEEE 1394 mean?

"1394" is an abbreviation of IEEE 1394, the name given to this high-performance serial bus. IEEE (the Institute of Electrical and Electronic Engineers) is the name of the engineering corps that developed this standard. It just so happens that this is the 1394th standard produced by the IEEE.

What is the relationship between IEEE 1394, FireWire, iLink, and DV?

These four names all refer to the same interface.

- *IEEE 1394* is the name of the standard, as used in the computer industry.
- *FireWire* is the brand name used by Apple to designate the implementation of the IEEE 1394 standard in its products.
- *iLink* is an initiative from Sony to create a brand name based on the IEEE 1394 standard. With iLink, Sony has given IEEE 1394 technology a user-friendly, easily-recognizable face, both for consumer electronics and the computer industry as a whole.
- *DV* is the logo used by video camcorders for the IEEE 1394 port. DV means "Digital Video."

What can the FireWire interface be used for?

With its high data transfer rates, the FireWire interface is great for consumer electronics and video peripherals. It is actually a point-to-point type interface. This means, for instance, that you can link one camcorder to another to make a copy without having to resort to a computer – a FireWire peripheral can in fact transmit data to another peripheral without going through a computer (host control). This lets several computers share a given peripheral. Camcorders incorporating a FireWire interface enable you to capture digital video images and transfer them to your computer affordably.

Can I link my FireWire Hard Drive and CD-RW drives together?

At this time, you can daisy chain up to 63 FireWire peripherals on the same bus, with a maximum of 16 peripherals on one branch. Just connect the first device to a FireWire port on your computer, and link the second FireWire connector of this peripheral to a port on the next peripheral, and so on, using the FireWire cables provided. Unlike USB topology, there is no need for hubs.

Remember that when two or more peripherals are linked in a daisy chain, you must use the external power supply provided with the devices, as the FireWire bus alone will not be capable of providing the power required for all of the peripherals.

FireWire sounds great, but my computer is not equipped with it. What can I do?

Nearly all of the newer Macintosh computers, and some PCs, are equipped with FireWire buses. The standard is becoming increasingly common at the time of printing. If your computer is not equipped, it may be possible, depending on your configuration, to add a FireWire PCI or PCMCIA card enabling you to connect your LaCie peripheral. Contact a computer supply specialist for details.

What about FireWire and asynchronous and isochronous data transfer?

The FireWire standard can handle two types of data transfer: asynchronous and isochronous. For traditional memory-mapped computer applications, which involve loading and storage, asynchronous transfer is quite appropriate and suitable.

FireWire also handles isochronous data transfer. Isochronous transfer guarantees data transfer at a predetermined speed, which is crucial for multimedia applications. This guarantee of uninterrupted transfer and on demand accessibility of time-critical data allows users to save on the cost of the large buffers that are normally required for such applications.

You will find additional information at the following Internet address:

<http://www.lacie.com/firewire>

10. Glossary

Bit – The smallest measure of computerized data, either a 1 or a 0. Eight bits equal one byte, or one character.

Byte – A sequence of adjacent binary digits, or bits, considered as a unit, 8 bits in length. There are 8 bits in 1 byte. See also MB (Megabyte) or GB (Gigabyte).

GB (Gigabyte) – This value is normally associated with data storage capacity. Basically, it means a thousand million or a billion bytes. In fact, it equals 1,073,741,824 bytes (or $1,024 \times 1,024 \times 1,024$).

Kb (Kilobit) – Equivalent to 1,000 bits.

Mb (Megabit) – Equivalent to 1,000,000 bits.

Kb/s – Kilobits per second. 480Kb/s is equal to 60KB/s.

Mb/s – Megabits per second. A means of measuring throughput. 480Mb/s is equal to 60MB/s.

KB (Kilobyte) – Basically, this means 1,000 bytes, but it is actually 1,024 bytes.

MB (Megabyte) – Basically means one million bytes, but is actually 1,024 Kilobytes or $1,024 \times 1,024$ bytes, which equals 1,048,576 bytes.

KB/s – Kilobytes per second. A means of measuring throughput.

MB/s – Megabytes per second. A means of measuring throughput.

Authoring – Creation, combination and setup of various files for a DVD-Video, DVD-ROM or audio disc. This includes audio, video, graphics and text files.

Backup – **(1)** The act of creating at least one additional copy of data onto a different (and safe) storage device from where it can be retrieved at a later time if needed. **(2)** A copy of a file, directory, or volume on a separate storage device from the original, for the purposes of retrieval in case the original is erased, damaged, or destroyed.

Block – A very small section of the storage media comprised of one or more sectors. A block is the smallest amount of space allocated on a drive for data storage. By default, a sector of data consists of 512 bytes.

Buffer – RAM cache that is faster than the data that is being delivered. Buffers are used so data may be stored and delivered to the receiving item as it is needed.

Buffer Underrun – A condition when the drive's buffer runs out of data while the CD-R/RW or DVD-R/RW media is still being written. The recording of a CD/DVD is a system-intensive process, and the recorder needs a constant stream of data. A buffer underrun occurs when the stream to the recorder is not fast enough to keep the recorder's buffer full, causing the recording to abort.

Bus – Electronic links that enable data to flow between the processor, RAM and extension cables (peripherals).

Cache, -ing – This is an area of electronic storage (usually RAM) set aside to store frequently used data from electro-mechanical storage (hard drives, floppy disks, CD/DVD-ROM, tape cartridges, etc.) Therefore, storing frequently used data in RAM can enhance your system's overall response to disk-intensive operations significantly.

CD-R (Compact Disc Recordable) – Recordable optical disc that has up to 700MB of storage capacity.

CD-ROM (Compact Disc Read Only Memory) – Small optical disc made of plastic that cannot be erased or written to.

CD-RW (Compact Disc ReWritable) – Rewritable optical disc that has up to 700MB of storage capacity and which theoretically can be rewritten 1,000 times.

CD-XA (CD-Extended Architecture) – A format developed by Philips and Sony that is intended to store computer data, video and audio tracks on the same CD-ROM.

Configuration – When talking about a PC, configuration is understood to be the sum of the internal and external components of the system, including memory, disk drives, the keyboard, the video subsystem and other peripherals, such as the mouse, modem or printer. The configuration also implies software: the operating system and various device managers (drivers), as well as hardware settings and options set by the user via configuration files.

Controller – This is a component or an electronic card (referred to in this case as a "controller card") that enables a computer to communicate with or manage certain peripherals. The controller manages the operation of the peripheral associated with it, and links the PC bus to the peripheral via a ribbon cable inside the PC. An external controller is an expansion card which fills one of the free slots inside your PC and which enables a peripheral (CD-ROM drive, scanner or printer, for instance) to be connected to the computer.

Cross-platform – Term that refers to a device that is able to be operated by both Mac and Windows operating systems.

Data Stream – The flow of data that accomplishes a task, usually related to moving data from storage to computer RAM or between storage devices. In DVD-Video, these bits are processed by the decoder on the video player. This stream contains all the information necessary for the decoder to work and view the image on the DVD video player.

Decoder – The electronic component that deciphers the MPEG-II video stream. It paints the picture to the viewer's screen.

Digital – Discrete information that can be broken down to zero or one bits.

Disc at Once (DAO) – Authoring process in which the entire CD/DVD is recorded in one session, and data cannot be added after the recording is finished. This mode allows for the most control of the recording process for audio CDs because the gap between tracks can be set and the maximum capacity of the CD can be utilized.

Driver (peripheral manager) – A software component that enables the computer system to communicate with a peripheral. Most peripherals will not operate correctly – if at all – if the appropriate drivers are not installed on the system.

DVD (Digital Versatile Disc) – Optical disc technology that is replacing the CD-ROM disc (as well as the audio compact disc). DVD holds 4.7GB of information on one of its two sides, or enough for a 133-minute movie. With two layers on each of its two sides, it will hold up to 17GB of video, audio, or other information (compare this to the current CD-ROM disc of the same physical size, holding 700MB). DVD uses the MPEG-II file and compression standard. MPEG-II images have four times the resolution of MPEG-I images and can be delivered at 60 interlaced fields per second where two fields constitute one image frame (MPEG-I can deliver 30 non-interlaced frames per second). Audio quality on DVD is comparable to that of current audio compact discs.

DVD-R – DVD Recordable. These discs have the same write-once concept as CD-R, but with the added benefits of DVD media. There are two types of DVD-R disc: DVD-R General, intended for home use, and DVD-R Authoring, intended for professional DVD-Video development applications. These two types of DVD-R disc are not compatible, i.e. DVD-R Authoring discs cannot be written to in a DVD-R General-compatible drive and vice versa. Both kinds of discs are readable in most DVD players and drives, however. The latest DVD-R discs feature 4.7GB capacity.

DVD-RW – DVD ReWritable. Same multiple-write concept as CD-RW – theoretically, it can be rewritten about 1,000 times - but with the added benefits of DVD media. Discs have a 4.7GB capacity and are playable in many DVD drives and players.

DVD-RAM – DVD-RAM (DVD-Random Access Memory) is a rewritable DVD format that allows for more than 100,000 rewrites. DVD-RAM drives are available in internal and external units in a range of interfaces. DVD-RAM media uses a phase-change recording layer and is available as a bare disc, a single-sided disc in a removable cartridge, or a dual-sided disc in a permanent cartridge.

DVD-ROM – DVD (Digital Versatile Disc Read Only Memory) a disc with a capacity up to 25 times greater than that of a CD-ROM, which offers digital quality images for superior multimedia processing. The term DVD-ROM, which indicates it is a disc that can be used in read-only mode, is generally used to refer to a multimedia disc.

DVD-Video – Using the same technology for DVD, this format is designed to store movies on a DVD medium. Most DVD drives have the ability to read DVD-Video.

File System – Links the physical map of a disc to its logical structure. Thanks to the file system, users and computers can easily display path, directories and files recorded onto the disc.

Firmware – Permanent or semi-permanent instructions and data programmed directly into the circuitry of a programmable read-only memory or an electronically-erasable, programmable read-only memory chip. Used for controlling the operation of the computer or tape drive. Distinct from the software, which is stored in random access memory and can be altered.

Folder – A list created on a disk to store files. Creating folders and sub-folders enables you to organize the storage of your files in a logical, hierarchical manner so that you can find and manage them more easily.

Format, -ting, -ted – This is a process where a device is prepared to record data. In this process, the hard disk writes special information onto its own recording surfaces into areas (blocks) that are ready to accept user data. Since this operation causes all current user data stored on the hard disk to be lost, this is an infrequent operation that usually only happens at the factory that created the hard disk. It is unusual for something to happen to a hard disk that requires the end-user to initially perform this operation.

Hardware – Physical components of a computer system, including the computer itself and peripherals such as printers, modems, mice, etc.

Host Bus Adapter (HBA) – A printed circuit board that installs in a standard microcomputer and an interface between the device controller and the computer. Also called a controller.

Hot-plug, -gable – The ability to plug in a cable or connector while the computer and peripheral are powered-on without danger of system errors. Both FireWire and USB interfaces are hot-pluggable, while SCSI is not.

Hub – A device which links several peripherals together onto the same bus. Active hubs, which regenerate and retransmit signals down the cable, require a power supply. Passive hubs only interconnect various components.

Initialize, -ed, Initialization – After a hard drive (or other storage device) is formatted and partitioned, some special data needs to be written to it that helps the Mac and Windows create files and save data. The process is called initialization. This process, like formatting, causes all user data on the storage device to be lost.

Interface – The protocol data transmitters, data receivers, logic and wiring that link one piece of computer equipment to another, such as a hard drive to an adapter or an adapter to a system bus. Protocol means a set of rules for operating the physical interface, such as: do not read or write before the drive is ready.

I/O (Input/Output) – Refers to an operation, program or device whose purpose is to enter data into or to extract data from a computer.

Media – The material or device used to store information in a storage subsystem, such as a tape cartridge, CD, DVD or disk drive.

MPEG-II – Digital signal compression developed by the Moving Pictures Expert Group. It delivers excellent video playback with variable compression. Works by removing redundant signal information that occurs during the video encoding process.

Multisession – Authoring process where data is added incrementally to a CD/DVD in more than one recording session. This mode uses TAO, allowing you to add data during several sessions. With this mode, though, every time a session is added, nearly 15MB of information is used to create information about the session.

Operating System (OS) – Software that controls the assignment and use of hardware resources such as memory, processor time, disk space and peripherals. An operating system is the basis on which software (applications) run. Windows, Mac OS and UNIX are among the most common.

Overwrite – To write data on top of existing data thus erasing the original data.

Packet Writing (PW) – Authoring process that is very useful for data backup, but cannot be used to write audio CDs. Buffer underrun is impossible in this mode, because the data is written in “packets” of a few KB.

Partition, -ing – After being formatted, the hard drive is not quite yet ready to store files. It must first be divided into sections that will contain special information required for a Mac or PC to operate and other sections that will contain the files. This process of dividing up the hard drive is called partitioning. A partition is just one section of the hard drive that will contain either special data put there by Silverlining or other files and data.

Peripheral – A generic term applied to printers, scanners, mice, keyboards, serial ports, graphics cords, disk drives and other computer subsystems. This type of peripheral often relies on its own control software, known as a peripheral driver.

Plug and Play – Term used to refer to the ability of a device that can be connected and/or disconnected while the computer is running.

Port, hardware – A connection component (FireWire port, for example) that enables a microprocessor to communicate with a compatible peripheral.

Port, software – A memory address that identifies the physical circuit used to transfer information between a microprocessor and a peripheral.

RAM (Random Access Memory) – Generally referred to as a computer's “memory.” An integrated circuit memory chip that allows information to be stored and retrieved by a microprocessor or controller. The information can be stored or accessed in any order, and all storage locations are equally accessible.

Regional Protection Code (RPC) – This playback management system introduced with DVD-Video divides the world into six regions and sets a regional identification for both players and discs. This allows playback of discs only in their applicable region. Reproduction in more than one region may be made possible, depending on a software company's decision.

Seek Time – The amount of time (in thousandths of a second, or milliseconds) that it takes a hard drive's read/write head to move to a specific location on the disk. Average seek, then, is the average of a large number of random samplings all over the disk. Seek time is CPU independent, meaning that seek time is the same for a disk drive, whether it is attached to a computer or not.

Session at Once (SAO) – Authoring process which is similar to DAO, where all of the information is written to in one session, but SAO allows for the ability to begin another session and record at a later time. This mode allows for greater control of the recording process than MiS, PW or TAO, and more disc space can be utilized because there is no need for gaps between tracks.

Software – In a nutshell, software is a set of instructions for the computer. A set of instructions to perform a particular task is called a program. There are two main types of software: *system software* (an operating system such as Mac OS or Windows) which controls the operation of the computer and *application software* (programs such as Word or Excel) which enable users to perform tasks such as word processing, spreadsheet creation, graphics, etc.

Storage – In computers, any equipment in which information may be kept. PCs generally use disk units and other external storage media (diskettes, CD-ROMs, magnetic disks, etc.) for permanent storage of information.

Track at Once (TAO) – Authoring process where data is added one track at a time, and the data can be added at a later time. The CD being written to, though, can only be read in the CD recorder until the disc is finalized (meaning that no more data can be added). There is also a gap of 2 seconds added between tracks, which will be heard as noise in some audio players.

Transfer Rate – The rate at which the drive sends and receives data from the controller. Transfer rates for reading data from the disk drive may not be the same as the transfer rate for writing data to the disk drive. Transfer rates are CPU dependent, meaning that regardless of how great a transfer rate your drive is capable of, the actual transfer rate can only be as fast as the slowest of your hard drive and computer.

UDF – The Universal Disc Format developed by the Optical Storage Technology Association (OSTA), is a single file system for interchange of information in the computer arena. This file system was designed to be able to handle files from all other common file systems (computers).

Volume – A desktop mountable storage area, may be a partition of a hard drive, a removable disk or a cartridge. Typically measured in Megabytes or Gigabytes.

Utility – Software designed to perform maintenance tasks on the system or its components. Examples include backup programs, programs to retrieve files and data on disk, programs for preparing (or formatting) a disk or and resource editors.

11. Health, Safety and General Use Precautions

The drive you have just purchased includes a laser diode device, which classifies it as a "Laser Class I" product. This laser is not dangerous for the user under normal operating conditions. However, we strongly advise you not to place any reflective objects in the disc loading system, due to the risk of exposure to laser emissions that may be reflected by such objects.

Always follow the basic precautions listed below to use your LaCie drive safely and correctly. Respecting these guidelines will help to avoid the possibility of personal injury to yourself or others, as well as to prevent damage to your device and other computer equipment. These precautions include, but are not limited to, the following:

Health and Safety Precautions:

- Read this User's Manual carefully, and follow the correct procedure when setting up the device.
- Do not look inside or place your hand over the open DVD/CD media tray. Never look directly or indirectly (with a mirror) at the laser diode, even when the device is not in operation. If you expose your eyes or skin to the laser inside you drive, you risk damage or loss of your vision or other personal injury.
- Do not open your drive or attempt to disassemble or modify it. Never insert any metallic object into the drive to avoid any risk of electrical shock, fire, short-circuiting or dangerous emissions. Your drive contains no user-serviceable parts. If it appears to be malfunctioning, have it inspected by qualified LaCie service staff.
- Never expose your device to rain or use it near water or in damp or wet conditions. Never place containers on it containing liquids that may spill into its openings. Doing so increases the risk of electrical shock, short-circuiting, fire or personal injury.
- Make sure that the computer and drive are electrically grounded. If the devices are not grounded, there is an increased risk of electrical shock.
- Do not listen to audio with headphones at an excessive volume for prolonged periods of time. Doing so increases the risk of hearing damage or loss.
- Before listening to music with your drive, set the volume control to minimum. Sudden bursts of sound at loud volumes can cause immediate hearing damage or loss.

General Use Precautions:

- Do not expose the drive to temperatures outside the range of 5° C to 45° C (41° F to 104° F). Doing so may damage the drive or disfigure its casing. Avoid placing your drive near a source of heat or exposing it to sunlight (even through a window). Inversely, placing your drive in an environment that is too cold or humid may damage the unit.
- Always unplug the drive from the electrical outlet if there is a risk of lightning or if it will not be used for an extended period of time. Otherwise, there is an increased risk of electrical shock, short-circuiting or fire.
- Use only the power supply shipped with the device.
- Do not place heavy objects on top of the drive or use excessive force on its buttons, connectors and tray. Doing so increases the risk of damage to the device.
- Always place your drive in a horizontal position before using it. Otherwise, it may fall, causing damage to the device and / or corruption or loss of data.
- Always remove the disc from the disc tray before transporting your drive. Otherwise, written data may be destroyed or the drive's internal components may be damaged.
- Never use excessive force on the disc loading system; discs should be inserted effortlessly into your drive. If you detect a problem, consult the [Troubleshooting](#) section.
- Protect your drive from excessive exposure to dust during use or storage. Dust can build up inside the device, increasing the risk of damage or malfunction.
- Never use benzene, paint thinners, detergent or other chemical products to clean the outside of the drive. Such products will disfigure and discolor the front panel and casing. Instead, use a soft, dry cloth to wipe the device.